

# Startup-time control apparatus and stop-time control apparatus of internal combustion engine, and control methods thereof, and record medium

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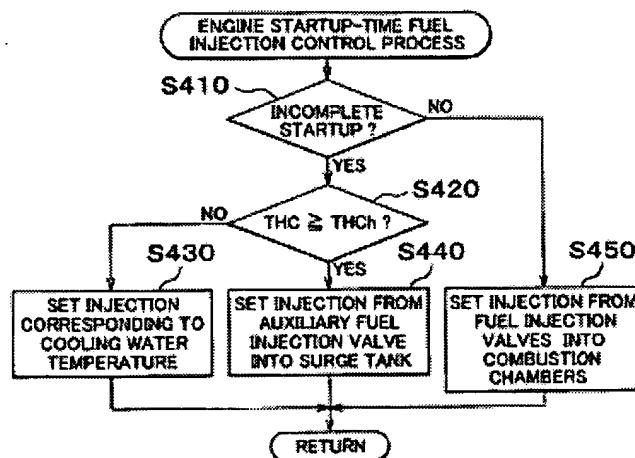
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## Abstract of US2003051692

If it is determined that the present engine startup is a high-temperature startup, immediately fuel injection in concert with start of cranking is prohibited. After a delay time elapses following the start of cranking, or when  $THC < THCh$  is satisfied, fuel injection is started. Therefore, the cranking during the delay time cools interior of the combustion chambers. Since fuel injection starts after the cooling, pre-ignition can be prevented.



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